Jeena Yin

Computer Science & Music Technology

Carnegie Mellon University | Bachelor of Computer Science and Arts | GPA: 3.89 | May 2020
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Summary

I am a **Computer Scientist**, **Musician**, and Designer, exploring Game Design and Interactive Art.
I presented a **machine learning** project at International Computer Music **Conference**.
I performed live electronic **music** at an overnight concert. I presented an **interactive art** project at a limestone mine.
I made a **game** about a fat sheep who wants to become a basketball, and did voice acting for the sheep.

Skills

Programming Languages
C, C#, Python, Javascript, SML, HTML/CSS, Swift

Tools & Frameworks
Node.js, p5.js, Processing, Jupyter Notebook, git/github

Software
Unity, Ableton, Max/MSP, ProTools, FMOD

Hardware
HTC Vive, Kinect, Leap Motion, Raspberry Pi, Arduino

Computer Science Courses

15-210	Parallel & Sequential Algorithms
15-213	Computer Systems
15-122	Data Structures
15-150	Functional Programming
15-213	Computer Systems
15-259	Probability and Computing

Relevant Courses

11-411	Natural Language Processing
53-571	Game Design, Prototyping and Production
10-615	Machine Learning and Art
05-499	Human-Computer Interaction: Accessibility
60-423	Interactive Art

Grants & Honors

Dean's List of School of Computer Science – *Dec. 2016, May 2017, Dec. 2017, May 2018*
Dean's List of BXA Intercollege Programs – *Dec. 2018*
Frank-Ratchye Fund for Art @ the Frontier Grant, Carnegie Mellon University – *May 2018*
School of Computer Science Travel Scholarship – *Jun. 2018*
College of Fine Arts Dean's Grant – *Jun. 2018*
School of Music Travel Fund– *May 2018*

Projects & Presentation

"Duo-Synth" Project Presentation, International Computer Music Conference – *Aug. 2018*
(Solo) A machine learning research that explores real-time AI algorithmic music generation based on multi-user motion capture. Project is presented in August 2018 at the International Computer Music Conference. It is developed with a single layer convolutional network implemented in Python, and uses Max/MSP and JavaScript.

"Music Toolbox": an Alexa Skill for Musicians – *Feb. 2019 – Present*
(Team) I am the manager and lead programmer of an Alexa skill project. We are developing a voice controlled smart metronome and drone. Project is primarily developed in Javascript using Node.js.

"cellulaire en colère" (Angry Cellphones), Art and Machine Learning Final Project – *May 2018*
(Team) Human voice generation using SampleRNN and WaveRNN. Presented in the form of arguing cell-phones with characteristics of angry individuals.

"Laa Laa vs. the Computerized World", Art and Machine Learning Project – *Mar. 2018*
(Team) Script generation with LSTM. Presented as a video-taped performance of the generated script.

"Debussy in a Nutshell", Art and Machine Learning Project – *Apr. 2018*
(Solo) Raw audio wave generation with WaveNet. Created ambient soundscape from 45 minutes of Debussy's music recordings.

Work Experience

VR Researcher for "VR-Home," Entertainment Technology Center – *Jun.-Aug. 2018*
I built 4 multi-user VR spaces with a team of 5, aiming to make VR experiences comfortable and authentic. Project was developed with Unity, C#, and HTC Vive. Project was later renamed as "Abode".

Full-Stack Web App Developer, The Zoom City Project – *Sep.-Dec. 2017*
Built 2 interactive children's ebooks to teach children English. Implemented speech recognition with Web Speech API. Speech recognition/natural language processing. UI Design. JavaScript. Framer

15-322 Teaching Assistant – *Aug.-Dec. 2018*
Introduction to Computer Music

18-090 Teaching Assistant – *Aug.-Dec. 2018*
Multimedia Signal Processing

Service & Extra Curricular Activities

Volunteer (Teacher/Archivist), Assemble – *Jun.-Aug. 2018*
Lead workshops that taught arts and technology to children of age 4-12 at Assemble, a Pittsburgh non-profit community space dedicated to fostering learning and creativity. Archived data of past attendees.

Member of "One Night in Beijing" Annual Cultural Show, Carnegie Mellon University – *Jan. 2017-Present*
Actor, Dancer

Co-Stage Manager: Scotch'n'Soda Theatre, Carnegie Mellon University – *Jan.-Apr. 2017*
Co-stage-managed the largest annual carnival theatre: "Heathers".

Certified CRLA Level 1 Peer Tutor, Carnegie Mellon University – *Feb. 2017-May. 2018*
Tutored 3 Computer Science courses:
15-122: Principles of Imperative Computation,
15-150: Principles of Functional Programming,
15-251: Great Ideas in Theoretical Computer Science

Large-Scale Musical Performances

Subsurface, Carnegie Mellon University Exploded Ensemble – *Dec. 2017*
Subsurface is a music festival in a limestone mine. I debut my Duo-Synth project at Subsurface. I was a singer at the concert.

Subsurface 2.0, Carnegie Mellon University Exploded Ensemble – *Dec. 2018*
Subsurface 2.0 is the second version of the subsurface music festival that happened in a limestone mine. I was a lighting designer and keyboard player.

Snoozefest, Carnegie Mellon University Exploded Ensemble – *Apr. 2018*
Snoozefest is an overnight ambient electronic music concert. I performed two 30-minute-long electronic music sets.

References

Anil Ada – *aada@andrew.cmu.edu*
 Professor of Computer Science at Carnegie Mellon University

Jesse Stiles – *jessestiles@gmail.com*
 Professor of Media Art at Carnegie Mellon University

Golan Levin – *golan@andrew.cmu.edu*
 Professor of Art at Carnegie Mellon University